



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,519	06/19/2003	Kevin J. Murphy	42P16523	8605
45209	7590	11/13/2008		
INTEL/BSTZ			EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP			SHAND, ROBERTA A	
1279 OAKMEAD PARKWAY				
SUNNYVALE, CA 94085-4040				
			ART UNIT	PAPER NUMBER
			2416	
			MAIL DATE	DELIVERY MODE
			11/13/2008 PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/600,519

**Applicant(s)**

MURPHY ET AL.

**Examiner**

Roberta A. Shand

**Art Unit**

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5-7, 9-14, 16-18 and 20-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 9-14, 16-18 and 20-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 12-18 and 20-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 12-18 and 20-22 contain non-statutory language: “machine-accessible medium”. These claims do not define any structural or functional interrelationships between the data structures and other claimed aspects of the invention which permit the data structure’s functionality to be realized. In the specification (paragraph 40), a machine-accessible medium includes any mechanism that provides (i.e., stores and/or transmits) information in a form readable by a machine (e.g., a computer). For example, a machine-accessible medium includes RAM; ROM; magnetic or optical storage medium; flash memory devices; electrical, optical, acoustical ***or other form of propagated signals (e.g., carrier waves, infrared signals, digital signals); etc.*** A signal is a non-statutory subject matter, see Interim Guidelines pages 52-54.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 12-14, 23-26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mandin (U.S. 2004/0100979 A1) in view of Kyusojin (U.S. 2002/0114277 A1).
3. Regarding claims 1, 12 and 23, Mandin teaches (fig. 4) a method, comprising: determining, by a device that shares an upstream channel (26) with other devices, whether based, at least in part on particular data, an upstream channel data transfer rate can be improved over a current data transfer rate of a current upstream channel from the device to a remote system (fig. 1); and improving by the device, if the upstream channel data transfer rate can be improved, the upstream channel data transfer rate based, at least in part, on the particular data (abstract).
4. While Mandin teaches improving transfer rate between two devices using the same channel, Mandin does not explicitly teach the particular data comprise the device's transmit queue capacity data, upstream channel bandwidth data transmitted from the remote system, or both.
5. Kyusojin teaches (paragraph 94) the particular data comprise the device's transmit queue capacity data, upstream channel bandwidth data transmitted from the remote system, or both. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mandin's invention to include Kyusojin device to transmit queue capacity data, upstream channel bandwidth data transmitted from the remote system, or both in order to guarantee data flow.
6. Regarding claims 2, 13 and 24, Mandin teaches (fig. 1) the device that shares the upstream channel with other devices comprises a cable modem.

7. Regarding claims 3, 14 and 25, Mandin teaches (fig. 1) the remote system comprises a cable modem termination system (CMTS).

8. Regarding claim 26, Mandin teaches (fig. 1) a system, comprising: a cable modem termination system, to transmit and receive data packets; customer premise equipment (12), to receive the data packets from the CMTS (14) and transmit the data packets to the CMTS (14); a cable modem (16), coupled with the CMTS (14) and the CPE (12), to determine whether, based at least in part on particular data, an upstream channel data transfer rate can be improved over a current data transfer rate of a current upstream channel from the cable modem (16) to the CMTS (14), and improve, if the upstream channel data rate can be improved (abstract), the upstream channel data transfer rate based, at least in part, on the particular data (fig. 4); and a coaxial cable, to couple the cable modem with the CMTS (14) and transmit the data packets between the cable modem (16) and the CMTS (14).

9. While Mandin teaches improving transfer rate between two devices using the same channel, Mandin does not explicitly teach the particular data comprise the device's transmit queue capacity data, upstream channel bandwidth data transmitted from the remote system, or both.

10. Kyusojin teaches (paragraph 94) the particular data comprise the device's transmit queue capacity data, upstream channel bandwidth data transmitted from the remote system, or both. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mandin's invention to include Kyusojin device to transmit queue capacity

data, upstream channel bandwidth data transmitted from the remote system, or both in order to guarantee data flow.

11. Regarding claim 27, Mandin teaches (fig. 1) the cable modem (16) is integrated with the CPE.

12. Claims 5-7 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mandin in view of Kyusojin and further in view of Lansing (U.S. 203/0058795 A1).

13. Regarding claim 5 and 16, as mentioned above, Mandin and Kyusojin teach all of the limitations of claim 1.

14. Mandin and Kyusojin do not explicitly teach determining whether the upstream channel data transfer rate can be improved comprises determining whether the transmit queue capacity data indicates that the transmit queue is full.

15. Lansing teaches (paragraph 43) determining whether the transmit queue capacity data indicates that the transmit queue is full. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made modify Mandin and Kyusojin's system to include Lansing's determining whether the transmit queue capacity data indicates that the transmit queue is full reduce congestion within the system.

16. Regarding claims 6 and 17, Lansing teaches (paragraph 43) if the transmit queue capacity data indicates that the transmit queue is full: determining whether a capacity of the transmit

queue is at a maximum capacity; and increasing the capacity of the transmit queue, if the capacity is not at the maximum capacity (paragraph 39).

17. Regarding claims 7 and 18, Lansing teaches (paragraph 43) if the transmit queue capacity data indicates that the transmit queue is full: determining whether a capacity of the transmit queue is at a maximum capacity; and initiating a service flow, if the capacity of the transmit queue is at the maximum capacity (paragraph 39).

18. Claims 9-11 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mandin in view of Kyusojin and further in view of Horton (U.S. 6236678 B1).

19. Regarding claims 9-11 and 20-22, as mentioned above, Mandin teaches all of the limitations of claim 8.

20. Mandin and Kyusojin do not teach the bandwidth data comprises an upstream channel descriptor (UCD) message and an upstream bandwidth allocation map (MAP) message.

21. Horton teaches the bandwidth data comprises an upstream channel descriptor (UCD) message and an upstream bandwidth allocation map (MAP) message. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mandin and Kyusojin's system to include Horton's upstream channel descriptor (UCD) message and an upstream bandwidth allocation map (MAP) as this is well known in the art.

***Response to Arguments***

22. Applicant's arguments filed July 21, 2008 have been fully considered but they are not persuasive. Applicant argues that there is no mention of "the device's transmit queue capacity data" or "upstream channel bandwidth data transmitted from the remote system" in Kyusojin. Therefore, Kyusojin fails to disclose "the device's transmit queue capacity data, upstream channel bandwidth data transmitted from the remote system, or both". Kyusojin teaches in paragraph 94 best-effort flow packet data transfer can be realized while guaranteeing the transfer rate of bandwidth-guaranteed flow packet data, and only in the event that there are no packets in that queue (queue capacity), are tokens appropriated to best-effort flows, so best-effort flow packet data transfers can be prevented from affecting bandwidth-guaranteed flow packet data transfers.

***Conclusion***

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

24. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A. Shand whose telephone number is 571-272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Roberta A. Shand  
/R. A. S./  
Examiner, Art Unit 2616

/FIRMIN BACKER/  
Supervisory Patent Examiner, Art Unit 2416

**Application Number****Application/Control No.**

10/600,519

**Applicant(s)/Patent under  
Reexamination**

MURPHY ET AL.

**Examiner**

Roberta A. Shand

**Art Unit**

2416